

DETAILED ACTION

Status of the Application

1. Applicant's response filed on March 18, 2008 is acknowledged. Claims 1, 4, and 6-10 are currently pending. In the response, Applicant amended claim 1.

Applicant's amendment has overcome the objections to claims 1 and 4. No other rejections or objections are pending.

Election/Restrictions

2. This application is in condition for allowance except for the presence of claims 6-10 directed to an invention non-elected without traverse. Accordingly, claims 6-10 have been cancelled.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Rodrigues on June 12, 2008.

The application has been amended as follows:

In the claims:

1. (Currently Amended) A method of treating a surface of a substrate for a biochemical reaction system, the method comprising forming a polymer film on the surface by vapor deposition of a compound of formula (1) below and a compound of formula (2) below:



wherein R is one of a methyl group and an ethyl group, X in formula (1) is a methyl group, while X in formula (2) is one of a methyl group and a trifluoromethyl group, n1 is an integer from 1 to 3, n2 is an integer from 1 to 10, and m is an integer from 1 to 10,

wherein the film is formed directly on the substrate, which is made of silicon and ~~having~~ has silanol groups,

wherein the compound of said formula (1) and the compound of said formula (2) are simultaneously or sequentially deposited by vaporization.

Cancel claims 6-10.

4. The following is an examiner's statement of reasons for allowance: The instant claims 1 and 4 are drawn to a method for coating the surface of a silicon substrate. The claims require applying a compound of formula (1) and a compound of formula (2) to a silicon substrate by vapor deposition at low temperatures. The closest prior art is that of Hozumi et al. (Japanese Journal of Applied Physics (1997) 36: 4959-4963; newly cited and hereafter "Hozumi I") and Hozumi et al. (Langmuir (1999) 15(22): 7600-7604; cited previously and hereafter "Hozumi II").

Hozumi I teaches a method for forming water-repellant coatings on silicon substrates by vapor deposition at low temperatures (pages 4959-4960). The coatings of Hozumi I comprise a compound of formula (2) (see page 4959, where the FAS-17 compound is taught) and a compound similar to that of formula (1) (see page 4959, where the MTMOS compound is taught). However, Hozumi I does not teach coating a silicon substrate with a compound of formula (1) and formula (2) as required by the instant claims. Hozumi II teaches coating a silicon substrate with either a compound similar to formula (1) or a compound of formula (2) (page 7600-7601), but does not teach or suggest applying both compounds to the substrate. Rather, the teachings of Hozumi I suggest that coating a silicon substrate with a mixture of a compound of formula (1) and a compound of formula (2) is undesirable, since a silicon substrate coated with a compound of formula (2) (FAS-17) and a compound highly similar to formula (1) (MTMOS) resulted in decreased water repellency (pages 4962-4963). These teachings of Hozumi in combination with the evidence provided by Applicant indicating that coating a silicon substrate with a compound of formula (1) and a compound of formula (2) resulted in increased water repellency (see pages 6-8 of the specification and Figures 2-5) render the claimed method novel and unobvious.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANGELA BERTAGNA whose telephone number is (571)272-8291. The examiner can normally be reached on M-F, 7:30 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 571-272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kenneth R Horlick/
Primary Examiner, Art Unit 1637

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